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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/507,466	02/22/2000	David R. Brown	M3477.0000/P011	2426

24998 7590 11/27/2002

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EXAMINER

NGUYEN, THONG Q

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 11/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/507,466

Applicant(s)

BROWN, DAVID R.

Examiner

Thong Q. Nguyen

Art Unit

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-- Th MAILING DATE of this communication appears on th cover sh et with the correspond nce address --
Period f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-10 and 12-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-18 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The present Office action is made in response to the amendment (Paper No. 14) filed on 8/19/2002. .

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-3 and 8-10, are rejected under 35 U.S.C. 102(b) as being anticipated by Chahroudi (U.S. Patent No. 5,198,922, of record).

Chahroudi discloses an optical system having three optical elements (1-3). The optical system is subjected to receive light from a light source so that the light is splitted into transmissive light or reflective light dependent upon the operation of the optical element (1) disposed between the other two optical elements (2, 3). In particular, the optical system (10) comprises a first element (3) having an entrance planar surface and an output roughed surface, a shutter (1) having both roughed entrance and emitted surface, and a second element (2) having an output planar surface and an entrance roughed surface. The roughed surface of each elements (2, 3) comprises a pattern of microwedged projections which each is a non-textured and substantially planar shape wherein light transmits through them will change the directions. The microwedged projections have different physical shapes with respect to each other in a three-dimensional configuration so that a light beam emitting from a microwedged projection will direct/guide in an optical path which is different from the optical path of another

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beam passing through other microwedged projection. With regard to the feature that the first and second optical elements formed by shaping a same substrate, it is noted that each of the microwedged projections of the each optical elements (2 or 3) are formed on the same substrate. See element (3) for example. Regard to the method of manner in which the projections are formed on the substrate, i.e., shaping as recited in the claim, it is noted that a method step in an apparatus is not germane to the issue of patentability of device itself; therefore, the limitation of the method step has not been given patentable weight. As such, in comparison the optical element (3) with the optical device as claimed in the present claims, the optical element (3) of the optical system (10) provided by Chahroudi meets all of the limitations recited in the present claims.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1-2, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tedesco (U.S. Patent No. 5,861,990, of record) in view of Chahroudi (U.S. Patent No. 5,198,922, of record).

Tedesco discloses an optical device for receiving light from a light source so that the light outputting from the device is a diffusing light. The device (102) comprises a light entrance surface (104) and an output/exit light surface (106) wherein a pattern of microwedged projections are formed. The microwedged projections have different physical shapes with respect to each other in a three-dimensional configuration so that a light beam emitting from a microwedged projection will direct/guide in an optical path

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which is different from the optical path of another beam passing through other microwedged projection. As such, light reflected from two adjacent microwedged projections will provide respectively non-adjacent portions of a pattern. See Tedesco, columns 3-4 and fig. 1, for example. It is noted that Tedesco does not disclose that each projections comprises planar surfaces as recited in the present claims 1 and 9. However, the feature concerning the planar shape of the output surface of the projections as claimed is merely that of a preferred embodiment and no criticality has been disclosed. The support for that conclusion is found in the present specification at page 12 and shown in figure 6 in which applicant has admitted that the output surface of the projections are curved surface. Furthermore, the concept of making a surface having a pattern formed thereon wherein the pattern comprises a set of smooth projections or irregularly/roughed projections are clearly suggested to one skilled in the art as can be seen in the optical system provided by Chahroudi. In particular, Chahroudi discloses two embodiments in which the pattern has a smooth projections (see the first embodiment shown in figure 1) or the pattern has a roughed/irregular projections of planar surfaces (see the second embodiment shown in figure 2). Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the optical element provided by Tedesco by using a texture surface constituting by roughed/irregular structure of planar surfaces as suggested by Chahroudi for the purpose of improving the optical performance and meeting a particular design.

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6. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tedesco in view of Chahroudi as applied to claim 1 above, and further in view of Hoch et al (U.S. Patent No, 6,002,520, of record).

The combined product as provided by Tedesco and Chahroudi meets all of the device as claimed in present claim 6 except the feature of a lens for performing a Fourier transform operation and/or for modifying an incident light beam (Note: claim 7 does not provide any specific limitation for the so-called "modifying of incident light beam"). However, the use of a diffusing element in a system having a light source, a lens and a diffusing element is clearly disclosed in the art as can be seen in the optical system provided by Hoch et al. See columns 2-5 and figs. 1-4. Thus, it would have been obvious to one skilled in the art at the time the invention was made to utilize/apply the diffusing device provided by Tedesco and Chahroudi in an optical system having a lens disposed in front of the diffusing device as suggested by Hoch et al so that the lens will perform a Fourier transform operation of the light before it enters the diffusing element.

Allowable Subject Matter

7. Claims 12-18 are allowed over the cited art.

Response to Arguments

8. Applicant's arguments filed on 8/19/2002 have been fully considered but they are not persuasive.

Applicant has argued that the device provided by Chahroudi has different features from the device claimed. In particular, applicant has argued that the device of Chahroudi has its irregularly shaped output surfaces located in the interior of the optical

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device; and 2) the optical elements are formed by shaping a same substrate. The Examiner respectfully disagrees with the applicant's opinion for the following reasons: First, the optical device (10) provided by Chahroudi comprises three elements (1, 2 and 3). The element (3) is the only element used to reject the present claims because it is an optical element having a substrate wherein one side is a planar incident surface in which the light incident thereon, and the other side is an exterior (or exit) surface wherein a pattern of microwedged projections formed thereon. The manner in which the exterior surface being located with respect to other optical elements in the device provided by Chahroudi is not brought into consideration because the exterior surface of the element (3) still acts as an exterior surface of the optical element (3) with respect to the light (7). Second, in regard to the applicant's argument concerning the manner in which the microwedged are formed, i.e., shaping as recited in the claim, it is noted that a method step in an apparatus is not germane to the issue of patentability of device itself; therefore, the limitation of the method step has not been given patentable weight.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

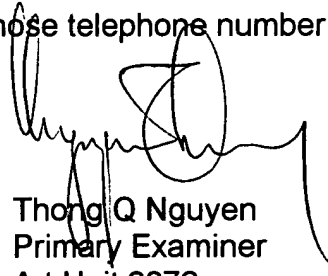
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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q Nguyen whose telephone number is 703 308 4814. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703 308 1687. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308 7724 for regular communications and 703 308 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.



Thong Q Nguyen
Primary Examiner
Art Unit 2872

November 25, 2002